

SYSTEMS, METHODS, AND COMPUTER PROGRAM PRODUCTS FOR
PROVIDING TRAFFIC FREQUENCY DIVERSIFICATION IN A CELLULAR
COMMUNICATION SYSTEM

ABSTRACT OF THE DISCLOSURE

A mobile terminal and a base station subsystem may communicate by assigning a primary or control frequency to the cell in which the mobile terminal is located and using that control frequency to exchange control information between the mobile terminal and the base station subsystem. The exchange of control information in the cell is constrained to the primary or control frequency. In addition, a plurality of traffic frequencies may be assigned to the cell and used to exchange traffic information between the mobile terminal and the base station subsystem using coordinated frequency hopping. Multi-path fading experienced on diverse, non-contiguous traffic frequency bands may be uncorrelated between the respective bands. Consequently, a code-word carried over a plurality of non-contiguous frequencies may be more likely to experience random, uncorrelated fading, which may improve the signal to noise ratio (SNR) of the signal and, as a result, improve network performance.